



*Commonwealth of Virginia*

***VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY***

**VALLEY REGIONAL OFFICE**

P.O. Box 3000, Harrisonburg, Virginia 22801

(540) 574-7800 FAX (804) 698-4178

Located at 4411 Early Road, Harrisonburg, Virginia

[www.deq.virginia.gov](http://www.deq.virginia.gov)

Matthew J. Strickler  
Secretary of Natural and Historic Resources

David K. Paylor  
Director  
(804) 698-4000

Amy Thatcher Owens  
Regional Director

September 1, 2021

Ms. Mary Beth Price  
Acting County Administrator  
Frederick County  
107 N. Kent Street  
Winchester, Virginia 22601  
[marybeth.price@fcva.us](mailto:marybeth.price@fcva.us)

Facility: Frederick County Regional Landfill  
Location: Frederick County  
Registration No.: 81312  
Plant ID No.: 51-069-0127

Dear Ms. Price:

Attached is a renewal to your permit to operate a municipal solid waste landfill pursuant to 9 VAC 5 Chapter 80, Article 1, of the Virginia Regulations for the Control and Abatement of Air Pollution. This permit incorporates provisions from your minor new source review permit and all other applicable state and federal air pollution control rules governing this facility.

The permit contains legally enforceable conditions. Failure to comply may result in a Notice of Violation and civil penalty. Please read all permit conditions carefully.

In evaluating the application and arriving at a final decision to issue this permit, the DEQ deemed the application complete on May 24, 2019 and solicited written public comments by placing an advertisement in the Winchester Star newspaper on June 16, 2021. The thirty-day comment period (provided for in 9 VAC 5-80-270) expired on July 16, 2021.

This permit approval shall not relieve Frederick County of the responsibility to comply with all other local, state and federal permit regulations.

Issuance of this permit is a case decision. The Regulations, at 9 VAC 5-170-200, provide that you may request a formal hearing from this case decision by filing a petition with the Board

within 30 days after this permit is mailed or delivered to you. Please consult this and other relevant provisions for additional requirements for such requests. Additionally, as provided by Rule 2A:2 of the Supreme Court of Virginia, you have 30 days from the date you actually received this permit or the date on which it was mailed to you, whichever occurred first, within which to initiate an appeal to court by filing a Notice of Appeal with:

Mr. David K. Paylor, Director  
Department of Environmental Quality  
P. O. Box 1105  
Richmond, VA 23218

If this permit was delivered to you by mail, three days are added to the thirty-day period in which to file an appeal. Please refer to Part Two A of the Rules of the Supreme Court of Virginia, at <http://www.courts.state.va.us/courts/scv/rules.html>, for information on the required content of the Notice of Appeal and for additional requirements governing appeals from decisions of administrative agencies.

If you have any questions concerning this permit, please contact me at (540) 574-7817 or via email at [Janardan.Pandey@deq.virginia.gov](mailto:Janardan.Pandey@deq.virginia.gov).

Sincerely,



Janardan R. Pandey, P.E.  
Air Permit Manager

Attachment: Permit

c: DEQ File  
Mr. Yongtian (Tom) He, PhD, U.S. EPA Region III (via email)  
Ms. Susan Tripp, DEQ OAPP (via email)  
Mr. Darren Shelhamer, Air Compliance Inspector (via email)



*Commonwealth of Virginia*

*VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY*

**Federal Operating Permit  
Article 1**


This permit is based upon the requirements of Title V of the Federal Clean Air Act and Chapter 80, Article 1 of the Commonwealth of Virginia Regulations for the Control and Abatement of Air Pollution. Until such time as this permit is reopened and revised, modified, revoked, terminated or expires, the permittee is authorized to operate in accordance with the terms and conditions contained herein. This permit is issued under the authority of Title 10.1, Chapter 13, §10.1-1322 of the Air Pollution Control Law of Virginia. This permit is issued consistent with the Administrative Process Act, and 9 VAC 5-80-50 through 9 VAC 5-80-300 of the State Air Pollution Control Board Regulations for the Control and Abatement of Air Pollution of the Commonwealth of Virginia.

Authorization to operate a Stationary Source of Air Pollution as described in this permit is hereby granted to:

Permittee Name: Frederick County  
Facility Name: Frederick County Regional Landfill  
Facility Location: 280 Landfill Road  
Winchester, Virginia 22601  
Registration Number: 81312  
Permit Number: VRO81312

September 1, 2021  
Effective Date

August 31, 2026  
Expiration Date

  
B. Keith Fowler, Deputy Regional Director, Valley Region

August 31, 2021  
Signature Date

Table of Contents, page 1  
Permit Conditions, pages 7 through 39  
Attachment - Source Test Reporting Format, 2 pages

## **TABLE OF CONTENTS**

FACILITY INFORMATION .....	2
LANDFILL REQUIREMENTS – EMISSION UNITS: EU-1, EU-2, AND EU-3.....	7
UTILITY FLARE – EMISSION UNIT: PCD-1 .....	10
JENBACHER GENERATOR STATIONARY RECIPROCATING INTERNAL COMBUSTION ENGINES (RICE) – EMISSION UNITS: PCD-2 AND PCD-3.....	12
EMERGENCY GENERATOR STATIONARY RICE CONSTRUCTED BEFORE JUNE 12, 2006 – EMISSION UNIT: EU-5 .....	19
EMERGENCY GENERATOR STATIONARY RICE CONSTRUCTED AFTER JUNE 12, 2006 – EMISSION UNITS: EU-6 AND EU-7 .....	22
GASOLINE DISPENSING FACILITY (GDS) – ST-1 .....	25
FACILITY WIDE CONDITIONS .....	27
INSIGNIFICANT EMISSION UNITS.....	29
PERMIT SHIELD & INAPPLICABLE REQUIREMENTS .....	30
GENERAL CONDITIONS .....	31
SOURCE TESTING REPORT FORMAT .....	40

## Facility Information

### Permittee

Frederick County Department of Public Works  
107 N. Kent Street  
Winchester, Virginia 22601-5000

### Responsible Official

Mary Beth Price  
Acting County Administrator

### Facility

Frederick County Regional Landfill  
280 Landfill Road  
Frederick County, Virginia

### Contact Person

J. Andrew Clark  
Environmental Manager  
(540) 665-5658

**County-Plant Identification Number:** 51-069-0127

**Facility Description: NAICS ID Code 562212:** Solid Waste Landfill – The Frederick County Regional Landfill is a municipal solid waste (MSW) management facility. The landfill accepts household and commercial waste, construction / demolition / debris (CDD) and sludge. The site includes an active landfill located south of Route 655 (Solid Waste Permit No. 529), a closed landfill south of the active landfill and west of Opequon Creek (Solid Waste Permit No. 40), and a CDD landfill located southwest of the closed landfill (Solid Waste Permit No. 591). The parcels containing these three waste management units are contiguous and county-owned property, hence all three landfills are considered as a single disposal facility. The facility is subject to the following subparts in 40 CFR 60 and 63:

- 40 CFR 60 Subpart IIII (*Standards of Performance for Stationary Compression Ignition Internal Combustion Engines*)
- 40 CFR 60 Subpart JJJJ (*Standards of Performance for Stationary Spark Ignition Internal Combustion Engines*)
- 40 CFR 63 Subpart ZZZZ (*National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*)
- 40 CFR 63 Subpart CCCCCC (*National Emissions Standards for Hazardous Air Pollutants for Gasoline Dispensing Facilities*)

## Emission Units

Equipment to be operated consists of:

Landfills

<b>Emission Unit ID</b>	<b>Stack ID</b>	<b>Emission Unit Description</b>	<b>Size/Rated Capacity*</b>	<b>Pollution Control Device (PCD) Description *</b>	<b>PCD ID</b>	<b>Pollutant Controlled</b>	<b>Applicable Permit Date</b>
EU-1	F-1	Closed MSW landfill cells (Solid Waste Permit 40)	1.4 million megagrams	LFG Specialties utility “candlestick” flare, Model CF 82518; GE Jenbacher SI Internal Combustion Genset, Model JGC 320 GS-L,L (two units)	PCD-1, PCD-2, PCD-3	NMOC, VOC	7/17/09, as amended 9/06/12
EU-2	F-2	Active MSW landfill cells (Solid Waste Permit 529)	12.71 million cubic meters	LFG Specialties utility “candlestick” flare, Model CF 82518; GE Jenbacher SI Internal Combustion Genset, Model JGC 320 GS-L,L (two units)	PCD-1, PCD-2, PCD-3	NMOC, VOC	7/17/09, as amended 9/06/12
EU-3	F-3	Active CDD landfill cells (Solid Waste Permit 591)	3.59 million cubic meters	N/A	N/A	N/A	7/17/09, as amended 9/06/12

### Landfill Surface & Roads

<b>Emission Unit ID</b>	<b>Stack ID</b>	<b>Emission Unit Description</b>	<b>Size/Rated Capacity*</b>	<b>Pollution Control Device (PCD) Description *</b>	<b>PCD ID</b>	<b>Pollutant Controlled</b>	<b>Applicable Permit Date</b>
EU-4	F-4	Active Landfill Working Faces and Landfill Surface & Roads	N/A	N/A	N/A	N/A	N/A

### Fuel Burning Equipment - Flare

<b>Emission Unit ID</b>	<b>Stack ID</b>	<b>Emission Unit Description</b>	<b>Size/Rated Capacity*</b>	<b>Pollution Control Device (PCD) Description *</b>	<b>PCD ID</b>	<b>Pollutant Controlled</b>	<b>Applicable Permit Date</b>
PCD-1	S-1	LFG Specialties “Candlestick” Utility Flare, Model CF 82518	40.9 MMBtu/hr	N/A	N/A	NMOC & VOC	7/17/09, as amended 9/06/12

**Fuel-Burning Equipment - Engines**

<b>Emission Unit ID</b>	<b>Stack ID</b>	<b>Emission Unit Description</b>	<b>Size/Rated Capacity*</b>	<b>Pollution Control Device (PCD) Description *</b>	<b>PCD ID</b>	<b>Pollutant Controlled</b>	<b>Applicable Permit Date</b>
PCD-2	S-2	General Electric Jenbacher SI Internal Combustion Genset Model JGC 320 GS-L.L (LFG) ("Engine 2")	9.8 MMBtu/hr	N/A	N/A	NMOC & VOC	7/17/09, as amended 9/06/12
PCD-3	S-3	General Electric Jenbacher SI Internal Combustion Genset Model JGC 320 GS-L.L (LFG) ("Engine 1")	9.8 MMBtu/hr	N/A	N/A	NMOC & VOC	7/17/09, as amended 9/06/12
EU-5	S-5	Kohler/John Deere CI Emergency Generator Model 100ROZJ/6059TF003 (Diesel) (at LPT Pump Station)	0.9 MMBtu/hr (100 kW)	N/A	N/A	N/A	N/A
EU-6	S-6	Kohler/John Deere CI Emergency Generator Model 100REOZJD/4045HF285 (Diesel) (at Office)	0.9 MMBtu/hr (86 kW)	N/A	N/A	N/A	N/A
EU-7	S-7	Marathon/John Deere CI Emergency Generator Model 284PSL1742/4024HF285B (Diesel) (at CDD Pump Station)	0.5 MMBtu/hr (60 kW)	N/A	N/A	N/A	N/A



**Gasoline Dispensing Facility**

<b>Emission Unit ID</b>	<b>Stack ID</b>	<b>Emission Unit Description</b>	<b>Size/Rated Capacity*</b>	<b>Pollution Control Device (PCD) Description *</b>	<b>PCD ID</b>	<b>Pollutant Controlled</b>	<b>Applicable Permit Date</b>
GST	S-9	Gasoline Storage Tank	1,000 gallons	N/A	N/A	N/A	N/A

## **Landfill Requirements – Emission Units: EU-1, EU-2, and EU-3**

1. **Limitations** – The design capacities of the landfills are as follows:

Closed MSW Landfill, Solid Waste Permit No. 40 (EU-1) – 1.4 million megagrams

Active MSW Landfill, Solid Waste Permit No. 529 (EU-2) – 12.71 million m<sup>3</sup>

CDD Landfill, Solid Waste Permit No. 591 (EU-3) – 3.59 million m<sup>3</sup>

A change in the design capacity may require a permit to modify and operate.  
(9 VAC 5-80-110 and Condition 2 of 7/17/09 Permit as amended 9/6/12)

2. **LFG Collection and Control System** - If the calculated non-methane organic compounds (NMOC) emission rate is greater than or equal to 34 Mg (as calculated according to 40 CFR 60.35f(a)(1)), the permittee shall comply with subsection a, subsection b, or subsections c, d, and e as follows:
- a. Demonstrate that the NMOC emission rate is less than 34 Mg per year through either Tier 2 testing in accordance with procedures codified in 40 CFR 60.35f(a)(3) or Tier 3 testing in accordance with procedures codified in 40 CFR 60.35f(a)(4) except as provided in 40 CFR 60.35f(a)(5); or
  - b. Demonstrate both of the following:
    - i. Using Tier 1 or Tier 2, that NMOC emissions are greater than or equal to 34 and less than 50 Mg/year, and
    - ii. Surface methane emissions do not exceed 500 ppm demonstrated by Tier 4 monitoring conducted in accordance with criteria codified in 40 CFR 60.35f(a)(6); or
  - c. Submit a landfill gas (LFG) collection and control system design plan meeting the requirements codified in 40 CFR 60.38f(d) to DEQ within one year after the first annual report in which the NMOC emission rate is greater than or equal to 34 Mg per year;
  - d. Install a gas collection and control system in compliance with criteria codified in 40 CFR 60.33f(b)(2) and 40 CFR 60.33f(c) within 30 months after the applicable report pursuant to criteria codified in 40 CFR 60.33f(b)(1)(i), and
  - e. Operate the installed gas collection and control system in compliance with provisions codified at 40 CFR 60.34f, 36f, and 37f.

The gas collection and control system may be removed if the provisions codified at 40 CFR 60.33f(e) are satisfied.  
(9 VAC 5-80-110, 9 VAC 5-40-5935, 9 VAC 5-40-5955, 9 VAC 5-40-5960, and 9 VAC 5-40-5965)

3. **Monitoring** – Upon the request of DEQ, the permittee shall install, calibrate, maintain and operate equipment for continuously monitoring and recording emissions or process parameters or both in accordance with methods and procedures acceptable to DEQ.  
(9 VAC 5-80-110, 9 VAC 5-40-40 F and 9 VAC 5-40-5965 B.2)
4. **Monitoring and Recordkeeping** – The permittee shall maintain records of all emissions data and operating parameters necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the DEQ. These records shall be maintained for each landfill (EU1, EU-2, and EU3) and shall include, but are not limited to:
  - a. Readily-accessible, on-site records of the maximum design capacity;
  - b. Annual calculated mass emission rate of NMOC from the landfill;
  - c. The current amount of solid waste in-place;
  - d. The year-by-year or average waste acceptance rate;
  - e. Site-specific values for  $C_{NMOC}$  and  $k$ , if obtained;
  - f. Age of each landfill;
  - g. Description, location, amount, and placement date of all nondegradable refuse including asbestos and demolition refuse placed in landfill areas, which are excluded from LFG estimation;
  - h. Installation date and location of all vents;
  - i. If the permittee claims that a facility is exempt from the provisions of the Regulations for the Control and Abatement of Air Pollution, it shall keep records as may be necessary to demonstrate to the satisfaction of DEQ its continued exempt status; and
  - j. Upon the request of DEQ, the permittee shall provide notifications and reports, revise reports, maintain records or report emissions tests or monitoring results in a manner and form and using procedures acceptable to DEQ.

The permittee shall maintain a file of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required by 40 CFR 60 recorded in a

permanent form suitable for inspection. These records shall be available for inspection by the DEQ and shall be current for the most recent five years. Off-site records may be maintained if they are retrievable within four hours. Either paper copy or electronic formats are acceptable.

(9 VAC 5-80-110, 9 VAC 5-40-5970 B, and Condition 29 of 7/17/09 Permit as amended 9/6/12)

5. **Reporting** – Not later than April 15 of each year, the permittee must submit to the DEQ an annual NMOC emission rate report to the DEQ. The NMOC emission rate shall be calculated in accordance with the methodology contained in 40 CFR 60.35f (a). The report shall include all data, calculations, sample reports and measurements used to estimate the emissions. If the estimated NMOC emission rate as reported in the annual report is less than 34 megagrams per year in each of the next five consecutive years, the permittee may elect to submit an estimate of the NMOC emission rate for the next five-year period in lieu of the annual report. This estimate shall include the current amount of solid waste-in-place and the estimated waste acceptance rate for each year of the five years for which an NMOC emission rate is estimated. All data and calculations upon which this estimate is based shall be provided to the DEQ. This estimate shall be revised at least once every five years. If the actual waste acceptance rate exceeds the estimated waste acceptance rate in any year reported in the five-year estimate, a revised five-year estimate shall be submitted. The revised estimate shall cover the five-year period beginning with the year in which the actual waste acceptance rate exceeded the estimated waste acceptance rate. The DEQ may request such additional information as may be necessary to verify the reported NMOC emission rate.  
(9 VAC 5-80-110, 9 VAC 5-40-5935 C and Condition 30 of 7/17/09 Permit as amended 9/6/12)
6. **Reporting** – If the permittee is required to install a gas collection and control system according to the provisions of 9 VAC 5 Chapter 40 Article 43.1, the permittee shall apply for a solid waste permit amendment in accordance with Part VII (9 VAC 20-80-480 et seq.) of 9 VAC 20 Chapter 80 (Solid Waste Management Regulations).  
(9 VAC 5-80-110 and Condition 34 of 7/17/09 Permit as amended 9/6/12)
7. **Reporting** – The permittee shall submit a closure report to the DEQ within 30 days of the date the MSW landfill stopped accepting waste. DEQ may request additional information as necessary to verify that permanent closure has taken place in accordance with the requirements of 40 CFR 258.60. If a closure report has been submitted to the DEQ, no additional wastes may be placed into the landfill without filing a notification of modification as described under 40 CFR 60.7(a)(4).  
(9 VAC 5-80-110, 9 VAC 5-40-5970 B.3 and Condition 35 of 7/17/09 Permit as amended 9/6/12)

## Utility Flare – Emission Unit: PCD-1

8. **Limitations** – The utility flare (PCD-1) shall be constructed so as to allow for emissions testing upon reasonable notice at any time, using appropriate methods. Sampling ports, safe sampling platforms, and access at the appropriate locations shall be provided when requested.  
 (9 VAC 5-80-110 and Condition 3 of 7/17/09 Permit as amended 9/6/12)
9. **Limitations** – The approved fuel for the utility flare (PCD-1) is LFG. Propane gas may be used as fuel to ignite the pilot flame. A change in the fuel may require a permit to modify and operate.  
 (9 VAC 5-80-110 and Condition 15 of 7/17/09 Permit as amended 9/6/12)
10. **Limitations** – Emissions from the utility flare (PCD-1) shall be controlled by proper operation and maintenance. The operators shall be trained in the proper operation of all relevant equipment. Training shall consist of a review and familiarization of the manufacturer's operating instructions, at minimum. The permittee shall maintain records of the required training including a statement of time, place and nature of training provided. The permittee shall have available good written operating procedures and a maintenance schedule for the utility flare (PCD-1). These procedures shall be based on the manufacturer's recommendations, at minimum.  
 (9 VAC 5-80-110 and Condition 16 of 7/17/09 Permit as amended 9/6/12)
11. **Limitations** – Emissions from the operation of the utility flare (PCD-1) shall not exceed the limits specified below:

PM	0.7	lbs/hr	3.0	tons/yr
PM-10 (filterable + condensable)	0.7	lbs/hr	3.0	tons/yr
Sulfur Dioxide	0.3	lbs/hr	1.4	tons/yr
Nitrogen Oxides (as NO <sub>2</sub> )	2.8	lbs/hr	12.2	tons/yr
Carbon Monoxide	15.1	lbs/hr	66.2	tons/yr

Annual emissions shall be calculated monthly as the sum of each consecutive 12-month period. These emissions are derived from the estimated overall emission contribution from operating limits. Exceedance of the operating limits may be considered credible evidence of the exceedance of emission limits. Compliance with these emission limits may be determined as stated in Conditions 9 and 10.

(9 VAC 5-80-110 and Condition 17 of 7/17/09 Permit as amended 9/6/12)

12. **Limitations** – The utility flare (PCD-1) shall be designed for and operated with no visible emissions, except for periods not to exceed a total of five minutes during any two consecutive hours.  
(9 VAC 5-80-110 and Condition 20 of 7/17/09 Permit as amended 9/6/12)
13. **Monitoring and Recordkeeping** – The permittee shall maintain records of all emissions data and operating parameters necessary to demonstrate compliance with this permit. The content of and format of such records shall be arranged with the DEQ. These records shall include:
  - a. Monthly and annual throughput of LFG in cubic feet to the utility flare (PCD-1). Annual throughput shall be calculated monthly as the sum of each consecutive 12-month period; and
  - b. Written operating procedures, scheduled and unscheduled maintenance and operator training for the utility flare (PCD-1), as required by Condition 10.

These records shall be available for inspection by the DEQ and shall be current for the most recent five years. Off-site records may be maintained if they are retrievable within four hours. Either paper copy or electronic formats are acceptable.

(9 VAC 5-80-110, Condition 29 of 7/17/09 Permit as amended 9/6/12)

## Jenbacher Generator Stationary Reciprocating Internal Combustion Engines (RICE) – Emission Units: PCD-2 and PCD-3

14. **Limitations** – The Jenbacher engines (PCD-2 and PCD-3) shall be constructed so as to allow for emissions testing upon reasonable notice at any time, using appropriate methods. Sampling ports, safe sampling platforms and access at the appropriate locations shall be provided when requested.  
 (9 VAC 5-80-110 and Condition 3 of 7/17/09 Permit as amended 9/6/12)
15. **Limitations** – The permittee must maintain and operate the Jenbacher generator engines (PCD-2 and PCD-3) according to the manufacturer's written instructions or procedures developed by the permittee that are approved by the manufacturer, over the entire life of the engine. The two 1,059 kW engines must be installed and configured according to the manufacturer's specifications, and the permittee may only change settings as approved by the manufacturer. The permittee must also maintain documentation indicating that the engines meet the requirements of Condition 21.  
 (9 VAC 5-80-110, Condition 4 of 7/17/09 Permit as amended 9/6/12, and 40 CFR 60.4234)
16. **Limitations** – The approved fuel for the Jenbacher engines (PCD-2 and PCD-3) is LFG. A change in the fuel may require a permit to modify and operate.  
 (9 VAC 5-80-110 and Condition 9 of 7/17/09 Permit as amended 9/6/12)
17. **Limitations** – The LFG burned in the Jenbacher engines (PCD-2 and PCD-3) shall have a minimum lower heating value (LHV) of 365 Btu/scf. The LFG minimum LHV shall be determined based on the percent (volume) methane in the LFG and a methane LHV of 920 Btu/scf. Where more than one sample is collected the average percent (volume) methane in the LFG shall be used to calculate the LFG LHV as follows:

$$LFG_{LHV} = \frac{\sum_{i=1}^n \%CH_{4i}}{(n)(100)} \times 920 \text{ Btu / scf} \dots\dots\dots \text{Equation 3}$$

Where:

$LFG_{LHV}$  = landfill gas LHV, Btu/scf  
 $CH_{4i}$  = percent (volume) methane in landfill gas sample, i  
 $n$  = number of landfill gas samples analyzed for  $CH_4$

(9 VAC 5-80-110 and Condition 10 of 7/17/09 Permit as amended 9/6/12)

18. **Limitations** – Total LFG throughput to the Jenbacher engines (PCD-2 and PCD-3) shall not exceed  $470.6 \times 10^6$  SCF per year. Throughput of the fuel shall be calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.

(9 VAC 5-80-110 and Condition 11 of 7/17/09 Permit as amended 9/6/12)

19. **Limitations** – Emissions from the operation of each of the Jenbacher engines (PCD-2 and PCD-3) shall not exceed the limits specified below:

PM	0.5	lb/hr
PM-10 (filterable + condensable)	0.5	lb/hr
Sulfur Dioxide	0.4	lb/hr
Nitrogen Oxides (as NO <sub>2</sub> )	1.9	lb/hr
Carbon Monoxide	9.7	lb/hr
Volatile Organic Compounds	0.6	lb/hr

These emissions are derived from the estimated overall emission contribution from operating limits. Exceedance of the operating limits may be considered credible evidence of the exceedance of emission limits. Compliance with these emission limits may be determined as stated in Conditions 16, 17, and 21.

(9 VAC 5-80-110 and Condition 13 of 7/17/09 Permit as amended 9/6/12)

20. **Limitations** – Total emissions from the Jenbacher engines (PCD-2 and PCD-3) shall not exceed the limits specified below:

PM	4.2	tons/yr
PM-10 (filterable + condensable)	4.2	tons/yr
Sulfur Dioxide	1.8	tons/yr
Nitrogen Oxides (as NO <sub>2</sub> )	17.0	tons/yr
Carbon Monoxide	85.0	tons/yr
Volatile Organic Compounds	5.7	tons/yr

Annual emissions shall be calculated monthly as the sum of each consecutive 12-month period. These emissions are derived from the estimated overall emission contribution from operating limits. Exceedance of the operating limits may be considered credible evidence of the exceedance of emission limits. Compliance with these emission limits may be determined as stated in Conditions 16, 17, 18, and 21.

(9 VAC 5-80-110 and Condition 14 of 7/17/09 Permit as amended 9/6/12)



21. **Limitations** – Emissions from the operation of each of the Jenbacher engines (PCD-2 and PCD-3) shall not exceed the limits specified below:

Carbon Monoxide (CO)	610 ppmvd @ 15% O <sub>2</sub> or 5.0 g/HP-hr
Nitrogen Oxides (as NO <sub>2</sub> )	220 ppmvd @ 15% O <sub>2</sub> 3.0 g/HP-hr
Volatile Organic Compounds (VOC)	80 ppmvd @ 15% O <sub>2</sub> 1.0 g/HP-hr

The permittee may choose to comply with the emission standards in units of ppmvd @ 15% O<sub>2</sub> or g/HP-hr. Compliance with these emission limits may be determined by keeping records of the most recent stack test data indicating compliance with these emission limits. (9 VAC 5-80-110, Condition 18 of 7/17/09 Permit as amended 9/6/12, and 40 CFR 60.4233(e))

22. **Limitations** – Visible emissions from the Jenbacher engines (PCD-2 and PCD-3) shall not exceed 10 percent opacity except during one six-minute period in any one hour in which visible emissions shall not exceed 20 percent opacity as determined by 40 CFR 60, Appendix A, Method 9). This condition applies at all times except during startup, shutdown, and malfunction.  
(9 VAC 5-80-110 and Condition 19 of 7/17/09 Permit as amended 9/6/12)
23. **Limitations** – The permittee must operate and maintain the Jenbacher engines (PCD-2 and PCD-3) in such a way that achieves the emission standards as required in Condition 21 over the entire life of the engine.  
(9 VAC 5-80-110 and 40 CFR 60.4234)
24. **Limitations** – The Jenbacher engines (PCD-2 and PCD-3) must meet the requirements of 40 CFR 63 Subpart ZZZZ by meeting the requirements of 40 CFR 60, Subpart JJJJ.  
(9 VAC 5-80-110 and 40 CFR 63.6590))
25. **Limitations** – The permittee shall demonstrate compliance with the emissions limits in Condition 21 according to the requirements specified in 40 CFR 60.4244, as applicable for a non-certified engine, and the permittee shall keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the Jenbacher engines (PCD-2 and PCD-3) in a manner consistent with good air pollution control practice for minimizing emissions.  
(9 VAC 5-80-110 and 40 CFR 60.4243(b))
26. **Monitoring and Recordkeeping** – The Jenbacher engines (PCD-2 and PCD-3) shall be equipped with a device to continuously measure the LFG consumed by the engines. The monitoring device shall be installed, maintained, calibrated and operated in accordance with

approved procedures which shall include, as a minimum, the manufacturer's written requirements or recommendations. The monitoring device shall be provided with adequate access for inspection and shall be in operation when the Jenbacher engines (PCD-2 and PCD-3) are operating.

(9 VAC 5-80-110 and Condition 12 of 7/17/09 Permit as amended 9/6/12)

27. **Monitoring and Recordkeeping** – The permittee shall maintain records of all emissions data and operating parameters necessary to demonstrate compliance with this permit. The content of and format of such records shall be arranged with the DEQ. These records shall include:
- a. Annual throughput of LFG in cubic feet to the Jenbacher engines (PCD-2 and PCD-3), calculated monthly as the sum of each consecutive 12-month period;
  - b. Records of the Jenbacher generator engines' manufacturer data, as required in Condition 15;
  - c. The results of all LFG fuel heat content tests to verify compliance with Condition 17;
  - d. Records to show compliance with the process emission limits as required in Condition 21;
  - e. Maintenance plan as required in Condition 25 and all scheduled and unscheduled maintenance, and operator training for the Jenbacher engines (PCD-2 and PCD 3);
  - f. Operation and monitoring records for the Jenbacher engines (PCD-2 and PCD-3) as required in Condition 26;
  - g. The results of all visible emission evaluations; and
  - h. All notifications submitted to comply with 40 CFR 60, Subpart JJJJ and all documentation supporting any notification.

These records shall be available for inspection by the DEQ and shall be current for the most recent five years. Off-site records may be maintained if they are retrievable within four hours. Either paper copy or electronic formats are acceptable.

(9 VAC 5-80-110, Condition 29 of 7/17/09 Permit as amended 9/6/12 and 40 CFR 60.4245(a))

28. **Testing** – Upon request by the DEQ, the permittee shall conduct visible emission evaluations on each of the two Jenbacher engines (PCD-2 and PCD-3) to demonstrate compliance with the visible emission limit contained in this permit. The details of the tests shall be arranged with the DEQ.
- (9 VAC 5-80-110 and Condition 26 of the 7/17/09 Permit as amended 9/6/12)

29. **Testing** – The permittee shall conduct annual testing of the on-site generated LFG to be burned in the Jenbacher engines (PCD-2 and PCD-3) to demonstrate compliance with the fuel specifications stipulated in Condition 17. The testing shall occur no later than one year from the anniversary date of the previous fuel testing. Details of the tests shall be arranged with the DEQ. One copy of the test results shall be submitted to the DEQ within 60 days after test completion.  
(9 VAC 5-80-110 and Condition 27 of the 7/17/09 Permit as amended 9/6/12)
30. **Testing** – At least every three years or every 8,760 hours of individual operation of the Jenbacher engines (PCD-2 and PCD-3), whichever comes first, performance testing shall be conducted for NO<sub>x</sub>, CO, and VOC using the procedures in Condition 31 and methods specified in Table 2 of 40 CFR 60, Subpart JJJJ to demonstrate compliance with the emission limits in Condition 21.

The permittee shall submit a test protocol at least 30 days prior to testing. Samples taken as required by this permit shall be analyzed in accordance with 1 VAC 30-45, Certification for Noncommercial Environmental Laboratories, or 1 VAC 30-46, Accreditation for Commercial Environmental Laboratories. Testing shall conform to the test report format enclosed with this permit. One copy of the test results shall be submitted to the DEQ within 60 days after completion of the testing. Other details of the test shall be arranged with the DEQ.

One copy of the performance test shall be submitted to the U.S. Environmental Protection Agency at the following address:

Chief, Air Section  
Enforcement & Compliance Assurance Division  
Air, RCRA & Toxics Branch  
U.S. EPA Region 3  
1650 Arch Street 3ED21  
Philadelphia, PA 19103

(9 VAC 5-80-110 and 40 CFR 60.4243(b)(ii))

31. **Testing** – The permittee shall follow the procedures outlined below when conducting performance tests on the Jenbacher engines (PCD-2 or PCD-3) to show compliance with the emissions limits in Condition 21.
- a. Each performance test must be conducted within 10 percent of 100 percent peak (or the highest achievable) load and according to the requirements in 40 CFR 60.8 and under the conditions that are specified in Table 2 of 40 CFR 60, Subpart JJJJ.
  - b. Performance tests may not be conducted during periods of startup, shutdown, or malfunction, as specified in 40 CFR 60.8(c). If the stationary SI internal combustion engine is non-operational, you do not need to startup the engine solely to conduct a

performance test; however, you must conduct the performance test immediately upon startup of the engine.

- c. Three separate test runs must be conducted for each performance test required in this condition, as specified in 40 CFR 60.8(f). Each test run must be conducted within 10 percent of 100 percent peak (or the highest achievable) load and last at least 1 hour.
- d. To determine compliance with the NO<sub>x</sub> mass per unit output emission limitation, convert the concentration of NO<sub>x</sub> in the engine exhaust using Equation 4:

$$ER = \frac{C_d \times 1.912E^{-3} \times Q \times T}{HP - hr} \dots\dots\dots \text{Equation 4}$$

Where:

- ER = Emission rate of NO<sub>x</sub> in g/HP-hr.
- C<sub>d</sub> = Measured NO<sub>x</sub> concentration in parts per million by volume (ppmv).
- 1.912E<sup>-3</sup> = Conversion constant for ppm NO<sub>x</sub> to grams per standard cubic meter at 20 degrees Celsius.
- Q = Stack gas volumetric flow rate, in standard cubic meter per hour, dry basis.
- T = Time of test run, in hours.
- HP-hr = Brake work of the engine, horsepower-hour (HP-hr).

- e. To determine compliance with the CO mass per unit output emission limitation, convert the concentration of CO in the engine exhaust using Equation 5:

$$ER = \frac{C_d \times 1.164E^{-3} \times Q \times T}{HP - hr} \dots\dots\dots \text{Equation 5}$$

Where:

- ER = Emission rate of CO in g/HP-hr.
- C<sub>d</sub> = Measured CO concentration in ppmv.
- 1.164E<sup>-3</sup> = Conversion constant for ppm CO to grams per standard cubic meter at 20 degrees Celsius.
- Q = Stack gas volumetric flow rate, in standard cubic meters per hour, dry basis.
- T = Time of test run, in hours.
- HP-hr = Brake work of the engine, in HP-hr.

- f. For purposes of this permit condition, when calculating emissions of VOC, emissions of formaldehyde should not be included. To determine compliance with the VOC mass

per unit output emission limitation, convert the concentration of VOC in the engine exhaust using Equation 6:

$$ER = \frac{C_d \times 1.833E^{-3} \times Q \times T}{HP - hr} \dots\dots\dots \text{Equation 6}$$

Where:

- ER = Emission rate of VOC in g/HP-hr.
- C<sub>d</sub> = VOC concentration measured as propane in ppmv.
- 1.833E<sup>-3</sup> = Conversion constant for ppm VOC measured as propane, to grams per standard cubic meter at 20 degrees Celsius.
- Q = Stack gas volumetric flow rate, in standard cubic meters per hour, dry basis.
- T = Time of test run, in hours.
- HP-hr = Brake work of the engine, in HP-hr.

(9 VAC 5-80-110 and 40 CFR 60.4244)

- 32. **Testing** – If testing is conducted in addition to the monitoring specified in the permit, the permittee shall use the appropriate method(s) in accordance with the procedures approved by the DEQ.  
 (9 VAC 5-80-110)
- 33. **Reporting** – Owners and operators of stationary SI ICE that are subject to performance testing must submit to DEQ a copy of each performance test conducted in accordance with 40 CFR 60.4244 within 60 days after the test has been completed.  
 (9 VAC 5-80-110 and 40 CFR 60.4245(d))

**Emergency Generator Stationary RICE Constructed Before June 12, 2006 –  
Emission Unit: EU-5**

34. **Limitations** – The emergency stationary reciprocating internal combustion engine (RICE) (EU-5) must be operated in accordance with the following:

- a. Any operation other than emergency operation and maintenance and testing is prohibited;
- b. The permittee may operate the emergency engine (EU-5) for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by Federal, State or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing of such units is limited to 100 hours per year. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency RICE beyond 100 hours per year.

(9 VAC 5-80-110 and 40 CFR 63.6640(f))

35. **Limitations** – Emergency engine (EU-5) shall comply with the following maintenance requirements, as specified in sections 4(a) through (c) of Table 2d to Subpart ZZZZ:

- a. Change oil and filter every 500 hours of operation or annually, whichever comes first, or at an extended frequency if utilizing an oil analysis program as described in 40 CFR 63.6625(i);
- b. Inspect air cleaner every 1000 hours of operation or annually, whichever comes first; and
- c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first.

(9 VAC 5-80-110, 9 VAC 5-60-90, 9 VAC 5-60-100, and 40 CFR 63, Subpart ZZZZ)

36. **Limitations** – During periods of startup the permittee must minimize the time spent at idle for the emergency engine (EU-5) and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.

(9 VAC 5-80-110, 40 CFR 63.6625 (h), and 40 CFR 63 Subpart ZZZZ)

37. **Limitations** – The permittee has the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Condition 35. The oil analysis must be performed at the same frequency specified for changing the oil in Condition 35. The

analysis program shall at a minimum analyze the following three parameters: Total Acid Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Acid Number increases by more than 3.0 milligrams of potassium hydroxide (KOH) per gram from Total Acid Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If none of these condemning limits are exceeded, the permittee is not required to change the oil. If any of the limits are exceeded, the permittee shall change the oil within two business days of receiving the results of the analysis; if the emergency engine is not in operation when the results of the analysis are received, the permittee shall change the oil within two business days or before commencing operation, whichever is later. The permittee shall keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the emergency engine. The analysis program must be part of the maintenance plan for the emergency engine.

(9 VAC 5-80-110, 40 CFR 63.6625 (i) and 40 CFR 63.6625 (j))

38. **Monitoring** – The permittee shall install a non-resettable hour meter on the emergency engine (EU-5) if one is not already installed. The hour meters shall be provided with adequate access for inspection.  
(9 VAC 5-80-110 and 40 CFR 63.6625 (f))
39. **Monitoring** – The permittee shall operate and maintain the emergency engine (EU-5) according to the manufacturer's emission-related written instructions or develop and follow its own maintenance plan which must provide to the extent practicable for the maintenance and operation of the emergency engine (EU-5) in a manner consistent with good air pollution control practice for minimizing emissions.  
(9 VAC 5-80-110, 9 VAC 5-60-90, 9 VAC 5-60-100, and 40 CFR 63.6625 (e))
40. **Monitoring** - The permittee shall continually comply with the work practice standards in Condition 35 by complying with Condition 39.  
(9 VAC 5-80-110, 40 CFR 63.6640(a) and Table 6 of 40 CFR 63 Subpart ZZZZ)
41. **Recordkeeping** – The permittee shall maintain records of all emissions data and operating parameters necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the DEQ. These records shall include, but are not limited to:
  - a. Records of the maintenance conducted on the emergency engine (EU-5) in order to demonstrate that each engine is operated and maintained according its own maintenance plan required by Condition 39;
  - b. Records of the hours of operation of the emergency engine (EU-5) that are recorded on the non-resettable hour meter; and
  - c. Records of the oil analysis program, as required by Condition 37, if applicable.

These records shall be available for inspection by the DEQ and shall be current for the most recent five years.

(9 VAC 5-80-110 and 40 CFR 63.6655)

42. **Testing** – If testing is conducted in addition to the monitoring specified in this permit, the permittee shall use the appropriate method(s) in accordance with procedures approved by the DEQ.

(9 VAC 5-80-110)

43. **Reporting** – If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the management practice requirements on the schedule required in Condition 35, or if performing the management practice on the required schedule would otherwise pose an unacceptable risk under federal, state, or local law, the management practice can be delayed until the emergency is over or the unacceptable risk under federal, state, or local law has abated. The management practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under federal, state, or local law has abated. Sources must report any failure to perform the management practice on the schedule required and the federal, state or local law under which the risk was deemed unacceptable.

(9 VAC 5-80-110 and Footnote 2 of Table 2d of 40 CFR 63 Subpart ZZZZ)



**Emergency Generator Stationary RICE Constructed After June 12, 2006 –  
Emission Units: EU-6 and EU-7**

44. **Limitations** – The emergency engines (EU-6 and EU-7) must meet the requirements of 40 CFR 63 Subpart ZZZZ by meeting the requirements of 40 CFR 60, Subpart IIII.  
(9 VAC 5-80-110 and 40 CFR 63.6590(c))

45. **Limitations** – Emissions from the operation of the emergency engines (EU-6 and EU-7) shall not exceed the NSPS, Subpart IIII limits specified below:

	EU-6	EU-7
Non-Methane Hydrocarbons (NMHC) + NO <sub>x</sub>	4.0 g/kW-hr	4.7 g/kW-hr
CO	5.0 g/kW-hr	5.0 g/kW-hr
PM	0.30 g/kW-hr	0.40 g/kW-hr

The engines must be installed and configured according to the manufacturer's emission-related specifications. Compliance with these emission limits may be determined by keeping records of engine manufacture data indicating compliance with these emission limits.

(9 VAC 5-80-110, 40 CFR 60.4205(b), and 40 CFR 60.4211(c))

46. **Limitations** – The approved fuel for the emergency engines (EU-6 and EU-7) is diesel fuel with a sulfur content of no greater than 15 parts per million (0.0015%), except that any existing diesel fuel purchased (or otherwise obtained) prior to October 1, 2010, may be used until depleted.

(9 VAC 5-80-110 and 40 CFR 60.4207)

47. **Limitations** – The permittee must maintain and operate the emergency engines (EU-6 and EU-7) according to the manufacturer's written instructions or procedures developed by the permittee that are approved by the manufacturer, over the entire life of the engine. In addition, the permittee may only change settings as approved by the manufacturer.

(9 VAC 5-80-110, 40 CFR 60.4206, and 40 CFR 60.4211)

48. **Limitations** – The permittee must operate the emergency engines (EU-6 and EU-7) according to the requirements of this Condition. For the engines to be considered emergency engines, any operation other than emergency operation and maintenance and testing is prohibited. If the permittee does not operate the engines according to the requirements in this Condition, the engines will not be considered emergency engines under 40 CFR 60 Subpart IIII and must meet all requirements for non-emergency engines.

- a. There is no time limit on the use of the emergency engines (EU-6 and EU-7) in emergency situations.

- b. The permittee may operate the emergency engines (EU-6 and EU-7) for any combination of the purposes specified in (b) of this Condition for a maximum of 100 hours per calendar year. The emergency engines (EU-6 and EU-7) may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition EPA for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of the emergency engines beyond 100 hours per calendar year.

(9 VAC 5-80-110 and 40 CFR 60.4211 (f))

- 49. **Monitoring** – The permittee shall install non-resettable hour meters on the emergency engines (EU-6 and EU-7). The hour meters shall be provided with adequate access for inspection.

(9 VAC 5-80-110 and 40 CFR 60.4209)

- 50. **Recordkeeping** – The permittee shall obtain a certification from the fuel supplier with each shipment of diesel fuel for the emergency engines (EU-6 and EU-7). Each fuel supplier certification shall include the following:

- a. The name of the fuel supplier;
- b. The date on which the diesel fuel was received;
- c. The sulfur content of the diesel fuel; and
- d. A statement that the diesel fuel complies with the ASTM specifications D975 for diesel fuel.

Fuel sampling and analysis, independent of that used for certification, as may be periodically required or conducted by DEQ may be used to determine compliance with the fuel specifications stipulated in Condition 46. Exceedance of these specifications may be considered credible evidence of the exceedance of emission limits.

(9 VAC 5-80-110 and 40 CFR 60.4207)

- 51. **Recordkeeping** – The permittee shall maintain records of all emissions data and operating parameters necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the DEQ. For the emergency engines (EU-6 and EU-7), these records shall include, but are not limited to:

- a. The manufacturer's written maintenance and operating instructions or procedures developed by the permittee that are approved by the manufacturer;

- b. Records of engine manufacture data as required in Condition 45;
- c. Records of maintenance and operation demonstrating compliance with Condition 47;
- d. Annual hours of operation of each emergency engine (EU-6 and EU-7) that is recorded through the non-resettable hour meter, calculated monthly as the sum of each consecutive 12-month period; and
- e. All fuel supplier certifications in accordance with Condition 50.

These records shall be available for inspection by the DEQ and shall be current for the most recent five years.

(9 VAC 5-80-110)

## Gasoline Dispensing Facility (GDS) – ST-1

52. **Limitations – MACT CCCCCC** – The facility must, at all times, operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to DEQ which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. (9 VAC 5-80-110, 40 CFR 63.11111, and 40 CFR 63.11115)
53. **Limitations – MACT CCCCCC** – In accordance with 40 CFR 63 Subpart CCCCCC for gasoline dispensing facilities with monthly throughput less than 10,000 gallons of gasoline:
- a. The permittee must not allow gasoline to be handled in a manner that would result in vapor releases to the atmosphere for extended periods of time. Measures to be taken include, but are not limited to, the following:
    - i. Minimize gasoline spills;
    - ii. Clean up spills as expeditiously as practicable;
    - iii. Cover all open gasoline containers and all gasoline storage tank fill-pipes with a gasketed seal when not in use; and
    - iv. Minimize gasoline sent to open waste collection systems that collect and transport gasoline to reclamation and recycling devices, such as oil/water separators.
  - b. The permittee is not required to submit notifications or reports as specified in 40 CFR 63.11125, 40 CFR 63.11126, or 40 CFR 63 Subpart A, but you must have records available within 24 hours of a request by DEQ to document your gasoline throughput.
  - c. Portable gasoline containers that meet the requirements of 40 CFR Part 59, subpart F, are considered acceptable for compliance with a.iii of this condition.

If the throughput of the gasoline dispensing facility ever exceeds an applicable throughput threshold in 40 CFR 63.11111, the gasoline dispensing facility will remain subject to the requirements for sources above the threshold, even if the throughput later falls below the applicable throughput threshold.

(9 VAC 5-80-110 and 40 CFR 63.11116)

54. **Monitoring - MACT CCCCCC GDF Requirements** - The permittee shall monitor the monthly throughput of gasoline to the GDF. Monthly throughput is the total volume of gasoline loaded into, or dispensed from, all the gasoline storage tanks located at a single

affected GDF. If an area source has two or more GDF at separate locations within the area source, each GDF is treated as a separate affected source.  
(9VAC5-80-490, 9VAC5-60-100 and 40 CFR 63.11111(h))

55. **Recordkeeping – MACT CCCCCC** – The permittee must keep applicable records as specified in 40 CFR 63.11116(b) and 40 CFR 63.11125(d). The records shall include:
- a. Records of the occurrence and duration of each malfunction of operation (*i.e.*, process equipment) or the air pollution control and monitoring equipment.
  - b. Records of actions taken during periods of malfunction to minimize emissions in accordance with 40 CFR 63.11115(a), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.
  - c. Documentation of gasoline throughput.

These records shall be available for inspection by the DEQ and shall be current for the most recent five years.

(9 VAC 5-80-110, 40 CFR 63.11111(b), 40 CFR 63.11115, 40 CFR 63.11116(b), and 40 CFR 63.11125(d))

## Facility Wide Conditions

56. **Limitations** – Visible emissions from the landfill shall not exceed 20 percent opacity as determined by 40 CFR 60, Appendix A, Method 9), except during one six-minute period in any one hour in which visible emissions shall not exceed 30 percent opacity.  
(9 VAC 5-80-110 and Condition 21 of 7/17/09 Permit as amended 9/6/12)
57. **Limitations** – Unless otherwise specified, fugitive dust emission controls shall include the following or equivalent as a minimum:
- a. Dust from grading, cell construction, waste compaction, application of daily cover, wood waste chipping operations, storage piles and traffic areas shall be controlled by wet suppression or equivalent (as approved by the DEQ) control measures;
  - b. All material being stockpiled shall be kept moist or covered to control dust during storage and handling;
  - c. Dust from haul roads shall be controlled by wet suppression and prompt removal of dried sediment resulting from soil erosion and dirt spilled or tracked onto paved surfaces within the landfill; and
  - d. Reasonable precautions shall be taken to prevent deposition of dirt on public roads and subsequent dust emissions. Dirt spilled or tracked onto paved surfaces shall be promptly removed to prevent particulate matter from becoming airborne.
- (9 VAC 5-80-110 and Condition 6 of 7/17/09 Permit as amended 9/6/12)
58. **Limitations** – In order to minimize the duration and frequency of excess emissions, the permittee shall implement the DEQ-approved Dust Control Plan which outlines the preventive measures to be implemented for dust control at the landfill. The plan shall include the following minimum requirements as approved by DEQ:
- a. Identification of the personnel responsible for overseeing dust control;
  - b. Description and the frequency of measures to be taken to prevent excess emissions from grading, cell construction, waste compaction and daily cover application;
  - c. Description and the frequency of measures to be taken to prevent excess emissions from storage piles and stockpiling operations; and
  - d. Description and the frequency of measures to be taken to prevent dust from haul roads and other unpaved surfaces, and description and the frequency of measures to be taken to prevent deposition of dirt on paved surfaces within the landfills and access roads entering the landfill.

Any changes in the practices and procedures followed by the permittee shall be documented and submitted for DEQ approval within 90 days of the effective date of the changes.  
(9 VAC 5-80-110 and Condition 7 of 7/17/09 Permit as amended 9/6/12)

59. **Monitoring and Recordkeeping** – At least daily, the permittee shall visually survey the trafficable roads at the site and landfill activities for any sources of excessive fugitive emissions. For the purpose of this survey, excessive emissions are considered to be any visible emissions that leave the facility site boundaries. The presence of excessive fugitive emissions shall require further investigation as to the cause of the emissions and timely corrective action shall be taken. If water is used to control the fugitive dust emissions, the permittee shall take care not to create a water quality problem from surface water runoff. All observations and corrective actions taken shall be logged and recorded.  
(9 VAC 5-80-110 and Condition 28 of 7/17/09 Permit as amended 9/6/12)
60. **Monitoring and Recordkeeping** – The permittee shall maintain records of all emissions data and operating parameters necessary to demonstrate compliance with this permit. The content of and format of such records shall be arranged with the DEQ. These records shall include, but are not limited to:
- a. Installation date and location of all vents;
  - b. Scheduled and unscheduled maintenance and operator training;
  - c. A copy of the DEQ-approved Dust Control Plan; and
  - d. Daily logs of the visual survey of the trafficable roads at the site and landfill activities to include the following:
    - i. The date, time, and name of the person performing each inspection;
    - ii. Whether or not excessive fugitive emissions are observed and the suspected cause of such emissions; and
    - iii. The date, time, and type of corrective actions taken.

These records shall be available for inspection by the DEQ and shall be current for the most recent five years.

(9 VAC 5-80-110 and Condition 29 of 7/17/09 Permit as amended 9/6/12)

61. **Testing** – If testing is conducted in addition to the monitoring specified in this permit, the permittee shall use the appropriate methods in accordance with procedures approved by the DEQ.  
(9 VAC 5-80-110)

## Insignificant Emission Units

62. The following emission units at the facility are identified in the application as insignificant emission units under 9 VAC 5-80-720:

Emission Unit No.	Emission Unit Description	Citation	Pollutant(s) Emitted (9 VAC 5-80-720 B)	Rated Capacity (9 VAC 5-80-720 C)
IS-1	Leachate Treatment Lagoons	9 VAC 5-80-720 B	VOC	4 million gallons
IS-2	Compost Chipper	9 VAC 5-80-720 B	NO <sub>x</sub> , CO, SO <sub>2</sub> , PM-10 and VOC	800 bhp
IS-3	Diesel Storage Tank	9 VAC 5-80-720 B	VOC	5,000-gal
IS-4	LFG-Fueled Space Heaters	9 VAC 5-80-720 A	NO <sub>x</sub> , CO, SO <sub>2</sub> , PM-10 and VOC	2 heaters @ 60,000 Btu/hr each 7 heaters @ 100,000 Btu/hr each
IS-5	Petroleum Liquid Storage Tanks	9 VAC 5-80-720 C	VOC	(varies)

These emission units are presumed to be in compliance with all requirements of the federal Clean Air Act as may apply. Based on this presumption, no monitoring, recordkeeping, or reporting shall be required for these emission units in accordance with 9 VAC 5-80-110. (9 VAC 5-80-110)



## Permit Shield & Inapplicable Requirements

63. Compliance with the provisions of this permit shall be deemed compliance with all applicable requirements in effect as of the permit issuance date as identified in this permit. This permit shield covers only those applicable requirements covered by terms and conditions in this permit and the following requirements which have been specifically identified as being not applicable to this permitted facility:

Citation	Title of Citation	Description of Applicability
40 CFR 60 Subpart WWW	Standards of Performance for Municipal Solid Waste Landfills That Commenced Construction, Reconstruction or Modification On or After May 30, 1991, but Before July 18, 2014	According to 40 CFR 60.750(d)(1), a landfill must comply with Subpart WWW until it becomes subject to an approved and effective state plan implementing 40 CFR 60 Subpart Cf. FCRL is now subject to 9 VAC 5 Chapter 40, Article 43.1 which implements Subpart Cf and therefore is no longer required to comply with Subpart WWW.
40 CFR 64	Compliance Assurance Monitoring (CAM)	FCRL does not use a control device to meet an emissions limit, so CAM does not apply.

Nothing in this permit shield shall alter the provisions of §303 of the federal Clean Air Act, including the authority of the administrator under that section, the liability of the owner for any violation of applicable requirements prior to or at the time of permit issuance, or the ability to obtain information by (i) the administrator pursuant to §114 of the federal Clean Air Act, (ii) the Board pursuant to §10.1-1314 or §10.1-1315 of the Virginia Air Pollution Control Law or (iii) the DEQ pursuant to §10.1-1307.3 of the Virginia Air Pollution Control Law.  
(9 VAC 5-80-140)

## General Conditions

64. **Federal Enforceability** – All terms and conditions in this permit are enforceable by the administrator and citizens under the federal Clean Air Act, except those that have been designated as only state-enforceable.

(9 VAC 5-80-110)

65. **Permit Expiration**

- a. This permit has a fixed term of five years. The expiration date shall be the date five years from the date of issuance. Unless the owner submits a timely and complete application for renewal to the DEQ consistent with the requirements of 9 VAC 5-80-80, the right of the facility to operate shall be terminated upon permit expiration.
- b. The owner shall submit an application for renewal at least six months but no earlier than eighteen months prior to the date of permit expiration.
- c. If an applicant submits a timely and complete application for an initial permit or renewal under this section, the failure of the source to have a permit or the operation of the source without a permit shall not be a violation of Article 1, Part II of 9 VAC 5 Chapter 80, until the Board takes final action on the application under 9 VAC 5-80-150.
- d. No source shall operate after the time that it is required to submit a timely and complete application under subsections C and D of 9 VAC 5-80-80 for a renewal permit, except in compliance with a permit issued under Article 1, Part II of 9 VAC 5 Chapter 80.
- e. If an applicant submits a timely and complete application under section 9 VAC 5-80-80 for a permit renewal but the Board fails to issue or deny the renewal permit before the end of the term of the previous permit, (i) the previous permit shall not expire until the renewal permit has been issued or denied and (ii) all the terms and conditions of the previous permit, including any permit shield granted pursuant to 9 VAC 5-80-140, shall remain in effect from the date the application is determined to be complete until the renewal permit is issued or denied.
- f. The protection under subsections F.1 and F.5 (ii) of section 9 VAC 5-80-80 F shall cease to apply if, subsequent to the completeness determination made pursuant to section 9 VAC 5-80-80 D, the applicant fails to submit by the deadline specified in writing by the Board any additional information identified as being needed to process the application.

(9 VAC 5-80-80, 9 VAC 5-80-110 and 9 VAC 5-80-170)

66. **Recordkeeping and Reporting** – All records of monitoring information maintained to demonstrate compliance with the terms and conditions of this permit shall contain, where applicable, the following:

- a. The date, place as defined in the permit, and time of sampling or measurements;
- b. The date(s) analyses were performed;
- c. The company or entity that performed the analyses;
- d. The analytical techniques or methods used;
- e. The results of such analyses; and
- f. The operating conditions existing at the time of sampling or measurement.

(9 VAC 5-80-110)

67. **Recordkeeping and Reporting** – Records of all monitoring data and support information shall be retained for at least five years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit.

(9 VAC 5-80-110)

68. **Recordkeeping and Reporting** – The permittee shall submit the results of monitoring contained in any applicable requirement to DEQ no later than March 1 and September 1 of each calendar year. This report must be signed by a responsible official, consistent with 9 VAC 5-80-80 G, and shall include:

- a. The time period included in the report. The time periods to be addressed are January 1 to June 30 and July 1 to December 31;
- b. All deviations from permit requirements. For purposes of this permit, deviations include, but are not limited to:
  - i. Exceedance of emissions limitations or operational restrictions;
  - ii. Excursions from control device operating parameter requirements, as documented by continuous emission monitoring, periodic monitoring, or CAM which indicates an exceedance of emission limitations or operational restrictions; or
  - iii. Failure to meet monitoring, recordkeeping, or reporting requirements contained in this permit.

- c. If there were no deviations from permit conditions during the time period, the permittee shall include a statement in the report that “no deviations from permit requirements occurred during this semi-annual reporting period.”

(9 VAC 5-80-110)

69. **Annual Compliance Certification** – Exclusive of any reporting required to assure compliance with the terms and conditions of this permit or as part of a schedule of compliance contained in this permit, the permittee shall submit to EPA and DEQ no later than March 1 each calendar year a certification of compliance with all terms and conditions of this permit including emission limitation standards or work practices for the period ending December 31. The compliance certification shall comply with such additional requirements that may be specified pursuant to §114(a)(3) and §504(b) of the federal Clean Air Act. The permittee shall maintain a copy of the certification for five (5) years after submittal of the certification. This certification shall be signed by a responsible official, consistent with 9 VAC 5-80-80 G, and shall include:

- a. The time period included in the certification. The time period to be addressed is January 1 to December 31;
- b. The identification of each term or condition of the permit that is the basis of the certification;
- c. The compliance status;
- d. Whether compliance was continuous or intermittent, and if not continuous, documentation of each incident of non-compliance;
- e. Consistent with subsection 9 VAC 5-80-110 E, the method or methods used for determining the compliance status of the source at the time of certification and over the reporting period; and
- f. Such other facts as the permit may require to determine the compliance status of the source.

One copy of the annual compliance certification shall be submitted to the EPA in electronic format only. The certification document should be sent to the following electronic mailing address:

R3\_APD\_Permits@epa.gov

(9 VAC 5-80-110)

70. **Permit Deviation Reporting** – The permittee shall notify the DEQ, within four daytime business hours, after discovery of any deviations from permit requirements which may cause excess emissions for more than one hour, including those attributable to upset

conditions as may be defined in this permit. In addition, within 14 days of the discovery, the permittee shall provide a written statement explaining the problem, any corrective actions or preventative measures taken, and the estimated duration of the permit deviation. The occurrence should also be reported in the next semi-annual compliance monitoring report pursuant to General Condition 68 of this permit.  
(9 VAC 5-80-110 F.2)

71. **Failure/Malfunction Reporting** – In the event that any affected facility or related air pollution control equipment fails or malfunctions in such a manner that may cause excess emissions for more than one hour, the owner shall, as soon as practicable but no later than four daytime business hours after the malfunction is discovered, notify the DEQ, by facsimile transmission, telephone or telegraph of such failure or malfunction and shall within 14 days of discovery provide a written statement giving all pertinent facts, including the estimated duration of the breakdown. Owners subject to the requirements of 9 VAC 5-40-50 C and 9 VAC 5-50-50 C are not required to provide the written statement prescribed in this paragraph for facilities subject to the monitoring requirements of 9 VAC 5-40-40 and 9 VAC 5-50-40. When the condition causing the failure or malfunction has been corrected and the equipment is again in operation, the owner shall notify the DEQ.  
(9 VAC 5-80-110 and 9 VAC 5-20-180)
72. **Severability** – The terms of this permit are severable. If any condition, requirement or portion of the permit is held invalid or inapplicable under any circumstance, such invalidity or inapplicability shall not affect or impair the remaining conditions, requirements, or portions of the permit.  
(9 VAC 5-80-110)
73. **Duty to Comply** – The permittee shall comply with all terms and conditions of this permit. Any permit noncompliance constitutes a violation of the federal Clean Air Act or the Virginia Air Pollution Control Law or both and is ground for enforcement action; for permit termination, revocation and reissuance, or modification; or, for denial of a permit renewal application.  
(9 VAC 5-80-110)
74. **Need to Halt or Reduce Activity not a Defense** – It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.  
(9 VAC 5-80-110)
75. **Permit Modification** – A physical change in, or change in the method of operation of, this stationary source may be subject to permitting under State Regulations 9 VAC 5-80-50, 9 VAC 5-80-1100, 9 VAC 5-80-1605, or 9 VAC 5-80-2000 and may require a permit modification and/or revisions except as may be authorized in any approved alternative operating scenarios.  
(9 VAC 5-80-110, 9 VAC 5-80-190 and 9 VAC 5-80-260)

76. **Property Rights** – The permit does not convey any property rights of any sort, or any exclusive privilege.  
(9 VAC 5-80-110)
77. **Duty to Submit Information** – The permittee shall furnish to the Board, within a reasonable time, any information that the Board may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Board copies of records required to be kept by the permit and, for information claimed to be confidential, the permittee shall furnish such records to the Board along with a claim of confidentiality.  
(9 VAC 5-80-110)
78. **Duty to Submit Information** – Any document (including reports) required in a permit condition to be submitted to the Board shall contain a certification by a responsible official that meets the requirements of 9 VAC 5-80-80 G.  
(9 VAC 5-80-110)
79. **Duty to Pay Permit Fees** – The owner of any source for which a permit was issued under 9 VAC 5-80-50 through 9 VAC 5-80-300 shall pay annual emissions fees, as applicable, consistent with the requirements of 9 VAC 5-80-310 through 9 VAC 5-80-350 and annual maintenance fees, as applicable, consistent with the requirements of 9 VAC 5-80-2310 through 9 VAC 5-80-2350. The actual emissions covered by the permit program fees for the preceding year shall be calculated by the owner and submitted to the DEQ by April 15 of each year. The calculations and final amount of emissions are subject to verification and final determination by the DEQ.  
(9 VAC 5-80-110, 9 VAC 5-80-310 et seq., 9 VAC 5-80-2310 et seq. and Condition 36 of 7/17/09 Permit as amended 9/6/12)
80. **Fugitive Dust Emission Standards** – During the operation of a stationary source or any other building, structure, facility, or installation, no owner or other person shall cause or permit any materials or property to be handled, transported, stored, used, constructed, altered, repaired, or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne. Such reasonable precautions may include, but are not limited to, the following:
- a. Use, where possible, of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads, or the clearing of land;
  - b. Application of asphalt, water, or suitable chemicals on dirt roads, materials stockpiles, and other surfaces which may create airborne dust; the paving of roadways and the maintaining of them in a clean condition;

- c. Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty material. Adequate containment methods shall be employed during sandblasting or similar operations;
- d. Open equipment for conveying or transporting material likely to create objectionable air pollution when airborne shall be covered or treated in an equally effective manner at all times when in motion; and
- e. The prompt removal of spilled or tracked dirt or other materials from paved streets and of dried sediments resulting from soil erosion.

(9 VAC 5-80-110 and 9 VAC 5-50-90)

81. **Startup, Shutdown, and Malfunction** – At all times, including periods of startup, shutdown, soot blowing, and malfunction, owners shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with air pollution control practices for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Board, which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

(9 VAC 5-80-110 and 9 VAC 5-50-20 E)

82. **Alternative Operating Scenarios** – Contemporaneously with making a change between reasonably anticipated operating scenarios identified in this permit, the permittee shall record in a log at the permitted facility a record of the scenario under which it is operating. The permit shield described in 9 VAC 5-80-140 shall extend to all terms and conditions under each such operating scenario. The terms and conditions of each such alternative scenario shall meet all applicable requirements including the requirements of 9 VAC 5 Chapter 80, Article 1.

(9 VAC 5-80-110)

83. **Inspection and Entry Requirements** – The permittee shall allow DEQ, upon presentation of credentials and other documents as may be required by law, to perform the following:

- a. Enter upon the premises where the source is located or emissions-related activity is conducted, or where records must be kept under the terms and conditions of the permit;
- b. Have access to and copy, at reasonable times, any records that must be kept under the terms and conditions of the permit;
- c. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; or

- d. Sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit or applicable requirements.

(9 VAC 5-80-110)

- 84. **Reopening For Cause** – The permit shall be reopened by the Board if additional federal requirements become applicable to a major source with a remaining permit term of three years or more. Such reopening shall be completed no later than 18 months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to 9 VAC 5-80-80 F. The conditions for reopening a permit are as follows:

- a. The permit shall be reopened if the Board or the administrator determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.
- b. The permit shall be reopened if the administrator or the Board determines that the permit must be revised or revoked to assure compliance with the applicable requirements.
- c. The permit shall not be reopened by the Board if additional applicable state requirements become applicable to a major source prior to the expiration date established under 9 VAC 5-80-110 D.

(9 VAC 5-80-110)

- 85. **Permit Availability** – Within five days after receipt of the issued permit, the permittee shall maintain the permit on the premises for which the permit has been issued and shall make the permit immediately available to DEQ upon request.

(9 VAC 5-80-110 and 9 VAC 5-80-150)

- 86. **Transfer of Permits**

- a. No person shall transfer a permit from one location to another, unless authorized under 9 VAC 5-80-130, or from one piece of equipment to another.
- b. In the case of a transfer of ownership of a stationary source, the new owner shall comply with any current permit issued to the previous owner. The new owner shall notify the Board of the change in ownership within 30 days of the transfer and shall comply with the requirements of 9 VAC 5-80-200.
- c. In the case of a name change of a stationary source, the owner shall comply with any current permit issued under the previous source name. The owner shall notify the Board of the change in source name within 30 days of the name change and shall comply with the requirements of 9 VAC 5-80-200.



(9 VAC 5-80-110 and 9 VAC 5-80-160)

87. **Permit Revocation or Termination for Cause** – A permit may be revoked or terminated prior to its expiration date if the owner knowingly makes material misstatements in the permit application or any amendments thereto or if the permittee violates, fails, neglects or refuses to comply with the terms or conditions of the permit, any applicable requirements, or the applicable provisions of 9 VAC 5 Chapter 80, Article 1. The Board may suspend, under such conditions and for such period of time as the Board may prescribe, any permit for any of grounds for revocation or termination or for any other violations of these regulations.

(9 VAC 5-80-110, 9 VAC 5-80-190 C and 9 VAC 5-80-260)

88. **Duty to Supplement or Correct Application** – Any applicant who fails to submit any relevant facts or who has submitted incorrect information in a permit application shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary facts or corrections. An applicant shall also provide additional information as necessary to address any requirements that become applicable to the source after the date a complete application was filed but prior to release of a draft permit.

(9 VAC 5-80-110 and 9 VAC 5-80-80 E)

89. **Stratospheric Ozone Protection** – If the permittee handles or emits one or more Class I or II substances subject to a standard promulgated under or established by Title VI (Stratospheric Ozone Protection) of the federal Clean Air Act, the permittee shall comply with all applicable sections of 40 CFR Part 82, Subparts A to F.

(9 VAC 5-80-110 and 40 CFR Part 82)

90. **Asbestos Requirements** – The permittee shall comply with the requirements of National Emissions Standards for Hazardous Air Pollutants (40 CFR 61) Subpart M, National Emission Standards for Asbestos as it applies to the following: Standards for Demolition and Renovation (40 CFR 61.145), Standards for Insulating Materials (40 CFR 61.148), and Standards for Waste Disposal (40 CFR 61.150).

(9 VAC 5-60-70 and 9 VAC 5-80-110)

91. **Accidental Release Prevention** – If the permittee has more, or will have more than a threshold quantity of a regulated substance in a process, as determined by 40 CFR 68.115, the permittee shall comply with the requirements of 40 CFR Part 68.

(9 VAC 5-80-110 and 40 CFR Part 68)

92. **Changes to Permits for Emissions Trading** – No permit revision shall be required under any federally approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for in this permit.

(9 VAC 5-80-110)

93. **Emissions Trading** – Where the trading of emissions increases and decreases within the permitted facility is to occur within the context of this permit and to the extent that the

regulations provide for trading such increases and decreases without a case-by-case approval of each emissions trade:

- a. All terms and conditions required under 9 VAC 5-80-110, except subsection N, shall be included to determine compliance;
- b. The permit shield described in 9 VAC 5-80-140 shall extend to all terms and conditions that allow such increases and decreases in emissions; and
- c. The owner shall meet all applicable requirements including the requirements of 9 VAC 5-80-50 through 9 VAC 5-80-300.

(9 VAC 5-80-110)

## **SOURCE TESTING REPORT FORMAT**

### Report Cover

1. Plant name and location
2. Units tested at source (indicate Ref. No. used by source in permit or registration)
3. Test Dates.
4. Tester; name, address and report date

### Certification

1. Signed by team leader/certified observer (include certification date)
2. Signed by responsible company official
3. \*Signed by reviewer

### Copy of approved test protocol

### Summary

1. Reason for testing
2. Test dates
3. Identification of unit tested & the maximum rated capacity
4. \*For each emission unit, a table showing:
  - a. Operating rate
  - b. Test Methods
  - c. Pollutants tested
  - d. Test results for each run and the run average
  - e. Pollutant standard or limit
5. Summarized process and control equipment data for each run and the average, as required by the test protocol
6. A statement that test was conducted in accordance with the test protocol or identification & discussion of deviations, including the likely impact on results
7. Any other important information

### Source Operation

1. Description of process and control devices
2. Process and control equipment flow diagram
3. Sampling port location and dimensioned cross section Attached protocol includes: sketch of stack (elevation view) showing sampling port locations, upstream and downstream flow disturbances and their distances from ports; and a sketch of stack (plan view) showing sampling ports, ducts entering the stack and stack diameter or dimensions

### Test Results

1. Detailed test results for each run
2. \*Sample calculations
3. \*Description of collected samples, to include audits when applicable

### Appendix

1. \*Raw production data
2. \*Raw field data
3. \*Laboratory reports
4. \*Chain of custody records for lab samples
5. \*Calibration procedures and results
6. Project participants and titles
7. Observers' names (industry and agency)
8. Related correspondence
9. Standard procedures

\* Not applicable to visible emission evaluations